

Executive White Paper

Resilient Edge Communications Platform

Unifying Cubic//DTECH Edge Compute & Vocality with the MightyMaxx Innovations RDU Connectivity Platform

Executive Briefing & Strategic Market Assessment

Executive Summary

Government agencies and critical infrastructure organizations are increasingly challenged to maintain secure, interoperable communications and mission continuity in contested, degraded, or disconnected environments. Existing communications architectures often rely on multiple independent systems that provide either interoperability, transport, or edge processing—but rarely all three in an integrated solution.

By combining the **Cubic//DTECH Edge Compute platform**, **Cubic//DTECH Vocality interoperability technologies**, and the **MightyMaxx Innovations RDU Connectivity Platform**, a differentiated capability emerges that addresses a broader operational requirement: **Assured Mission Continuity**.

Rather than positioning the solution as another communications platform, the integrated architecture enables organizations to maintain voice, data, video, and AI-enabled operations across multiple transport paths even when traditional infrastructure is unavailable or compromised.

This approach creates opportunities across Federal Civilian agencies, the Department of Defense, public safety organizations, critical infrastructure operators, transportation, utilities, and large commercial enterprises.

The Strategic Opportunity

Communications resilience has become a national priority.

Government modernization efforts increasingly emphasize:

- Continuity of Operations (COOP)
- Zero Trust Architecture
- Distributed Operations
- Tactical Edge Computing
- Artificial Intelligence
- Cyber Resilience
- Multi-Path Communications
- Emergency Communications
- Critical Infrastructure Protection

Few commercially available platforms combine all of these capabilities within a single architecture.

The proposed integrated solution establishes a new category:

Resilient Edge Communications Platform

This architecture combines:

- Multi-network connectivity
- Intelligent edge computing
- Radio over IP interoperability
- AI-enabled mission applications
- Communications redundancy
- Secure distributed operations

Integrated Solution Architecture

Cubic//DTECH Edge Compute

Provides localized processing capability supporting:

- AI inference
- Data analytics
- Video processing

- Local application hosting
- Mission software
- Tactical cloud services

Key advantage:

Mission applications continue operating even when cloud connectivity is degraded.

Cubic//DTECH Vocality

Provides secure interoperability across:

- Land Mobile Radio
- Telephone systems
- IP voice networks
- Satellite communications
- Legacy communications infrastructure
- Next-generation IP systems

Benefits include:

- Cross-agency interoperability
- Legacy modernization
- Multi-domain communications
- Simplified command and control

MightyMaxx Innovations RDU Connectivity Platform

Provides resilient transport across multiple network paths including:

- Cellular LTE
- 5G
- Satellite
- Wi-Fi

- Fiber
- Private networks
- MANET integration
- Additional IP-based transport technologies

Core capabilities include:

- Automatic failover
- Transport aggregation
- Communications redundancy
- Network survivability

Combined Operational Value

When integrated, the solution becomes significantly more valuable than the individual technologies.



Operational Requirement	Integrated Capability
Communications continuity	Multi-path transport redundancy
Voice interoperability	Cross-platform RoIP integration
AI at the edge	Local processing independent of cloud connectivity
Mission command	Mobile and fixed command operations
Cyber resilience	Distributed processing and diversified communications paths
Operational survivability	Automatic transport failover with continued application availability

The combined solution ensures that voice, data, video, and mission applications remain operational despite network failures, infrastructure damage, cyber events, or remote operating conditions.

Government Market Opportunities

Department of Homeland Security

Potential Components:

- Customs and Border Protection
- Homeland Security Investigations
- U.S. Border Patrol
- Federal Emergency Management Agency
- Transportation Security Administration
- Cybersecurity and Infrastructure Security Agency
- U.S. Coast Guard
- U.S. Secret Service

Representative Mission Applications

- Border surveillance
- Mobile command
- Disaster response
- Emergency communications
- Special security events
- Maritime operations
- Infrastructure protection

Department of Justice

Potential Agencies

- Federal Bureau of Investigation
- Drug Enforcement Administration

- Bureau of Alcohol, Tobacco, Firearms and Explosives
- United States Marshals Service
- Bureau of Prisons

Mission Applications

- Tactical operations
- Surveillance
- Protective operations
- Mobile command
- Crisis response
- Secure investigative communications

Department of Defense

Applicable Mission Areas

- Expeditionary operations
- Joint Task Force headquarters
- Special Operations Forces
- Tactical Edge Cloud
- Distributed command posts
- Joint All-Domain Command and Control (JADC2)
- Base resilience
- Coalition interoperability

State, Local, Tribal, and Territorial Public Safety

Applicable Organizations

- State Police
- Sheriff's Offices
- Municipal Police
- Fire Departments

- EMS
- Emergency Management Agencies

Mission Areas

- Incident command
- Active shooter response
- Search and rescue
- Natural disasters
- Wildfire operations
- Planned special events
- Regional interoperability

Critical Infrastructure Markets

The combined platform provides significant value to commercial sectors where uninterrupted communications are mission critical.

Energy

- Electric utilities
- Oil and gas
- Pipelines
- Offshore operations

Applications include:

- Storm restoration
- Field workforce connectivity
- Remote substations
- Critical infrastructure resilience

Transportation

- Airports

- Ports
- Rail systems
- Public transit

Applications

- Security operations
- Incident management
- Passenger safety
- Emergency response

Telecommunications

The platform enables resilient communications supporting:

- Private LTE
- Private 5G
- FirstNet-compatible architectures
- Satellite backhaul
- MANET deployments
- Hybrid enterprise communications

Sports, Entertainment, and Large Venues

Representative Customers

- Professional sports franchises
- Universities
- Convention centers
- Theme parks
- Entertainment venues

Mission Benefits

- Unified security communications

- AI-enabled crowd monitoring
- Emergency response
- Event command operations
- Communications redundancy

Artificial Intelligence at the Edge

The integration of Edge Compute transforms the platform beyond traditional communications.

Supported AI capabilities may include:

- Object detection
- Drone analytics
- License plate recognition
- Sensor fusion
- Video analytics
- Language translation
- Predictive maintenance
- Infrastructure monitoring

Processing occurs locally, reducing dependence on cloud connectivity while improving response times and operational resilience.

Funding Alignment

The integrated platform aligns well with numerous federal funding priorities, including:

- Homeland Security Grant Program
- Urban Area Security Initiative
- State Homeland Security Program
- Emergency Management Performance Grants
- Transit Security Grant Program

- Port Security Grant Program
- FEMA preparedness initiatives
- Department of Justice technology modernization grants

Because the solution addresses interoperability, resilience, emergency communications, and continuity of operations, it may qualify under multiple modernization and preparedness funding pathways.

Competitive Differentiation

Traditional communications vendors generally specialize in one of three areas:

- Connectivity
- Interoperability
- Computing

The proposed integrated platform combines all three.

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Traditional Approach	Integrated Platform
Single transport path	Multi-network resilient connectivity
Communications only	Communications plus edge computing
Limited interoperability	Enterprise-wide interoperability
Cloud dependency	Cloud-independent edge operations
Infrastructure centric	Mission continuity centric

This positions the solution as a strategic operational capability rather than simply another communications product.

Strategic Value Proposition

The integrated platform delivers:

- Mission continuity
- Communications resilience
- Multi-network redundancy
- AI-enabled edge operations
- Secure interoperability
- Reduced operational risk
- Improved disaster survivability
- Lower lifecycle costs through infrastructure consolidation
- Increased operational flexibility
- Enhanced cyber resilience

Potential Teaming Actions and Roles

I believe we can accelerate adoption of this integrated capability developing a unified plan that bridges operational requirements, acquisition strategy, and market engagement.

Potential contributions include:

- Federal market strategy development
- Mission-based solution positioning
- Executive stakeholder engagement
- Systems integrator partnerships
- Capture strategy support
- Opportunity qualification
- Grant alignment and funding strategy
- Executive-level messaging and briefing support
- Public safety and homeland security outreach
- Cross-sector partnership development